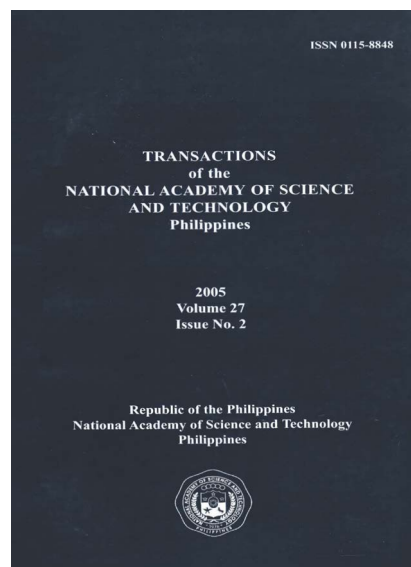


Transactions NAST PHL, is the official journal of the National Academy of Science and Technology Philippines. It has traditionally published papers presented during the Academy's Annual Scientific Meeting since 1979 to promote science-based policy discussions of and recommendations on timely and relevant national issues as part of its functions as a national science academy. Starting in 2021, this journal has been open to contributions from the global scientific community in all fields of science and technology.

---



## Increasing Productivity by Reducing Postharvest Losses

**Ricardo L. Cachuela**

Executive Director  
Bureau of Postharvest Research and Extension

---

### Citation

Cachuela RL. 2005. Increasing productivity by reducing postharvest losses. Transactions NAST PHL 27(2): 271-272. [doi.org/10.57043/transnastphl.2005.4648](https://doi.org/10.57043/transnastphl.2005.4648)

### Copyright

© 2005 Cachuela RL

## **Infrastructure and Support Services for Philippine Agriculture 2020**

### **INCREASING PRODUCTIVITY BY REDUCING POSTHARVEST LOSSES**

**Ricardo L. Cachuela**

Executive Director

Bureau of Postharvest Research and Extension

As most of you would probably know, the Department of Agriculture has the full mandate in the area of postharvest of grains, high value crops, fishery, and all other commodities that do not fall under processed products.

In fact, PhP 2 billion each year are spent on this program of postharvest. In the 70s, losses were estimated to be 37% in grains postharvest. In the 80s, this was reduced to 23%. Our program is simply to keep on upgrading whatever postharvest technology is available. For high-value commercial crops, we try to reduce postharvest losses in the upland production scheme by promoting the use of the cold chain system.

For fishery, meat, or livestock products, we are also upgrading through the use of cold chain technology which we are doing with private sector. For the grains postharvest, we have examined every operation and we have come to a conclusion that the drying component is the major contributor to postharvest losses. The Philippines is very high in humidity and we have a very distinct wet season. Therefore, we really need to modernize our postharvest system by putting up dryer facilities for rice and corn to reduce not only the physical and quantitative losses but also the loss in the quality of produce. The high humidity makes corn more susceptible to fungal infection which could produce, e.g., the aflatoxin in corn which is transmitted to livestock and to our feeds, and therefore to the food that we eat.

But one major constraint to dryer technology is the use of petroleum-based fuel or energy and thus its cost. Thus, even the traders who are supposed to be the richer sector are still using the highway to dry *palay*. That's one of the reasons that we recommend to put more money into drying facilities.

For high value commercial crops, there are enormous losses at about 40%. For upland vegetables, postharvest losses can be as high as 100%, because of poor handling facilities. These are high value crops and are one of the sectors which can be in a better position than the rice sector. So, we put in the tramline systems as part of the handling technology. We also have cold chain facilities that include pre-cooler, cold storage and refrigerated transport.

In summary, the Department of Agriculture has adopted a bottom-up approach. You probably have heard of the *huwarang palengke* or model market which is basically trying to get the market involved in the supply chain. The strategy is to establish strong market linkages between markets and producers. Market information is fed to the farmers/producers so that they can program their farming to meet the demand. Another strategy is the reduction or even elimination of middlemen. In some areas, there are seven layers that, for instance, for high value crops, the consumer ends up paying so much for the commodity. At the bottom of the *huwarang palengke*, we also put up the food lane. The food lane enables the transport of the commodity, especially perishables, to go straight to the market from the trading post or even the production sites faster without any problems in checkpoints, delays in the highways and poor handling management.

I believe this is where the private sector can come in. If they cluster themselves well, they would be able to reduce the difficulty of handling the investment cost in establishing and using the cold chain and handling facilities such as refrigerated truck and vans.

One of the greatest difficulties of the farming sector is the impact of energy. Postharvest handling will involve energy, especially in the need for drying. This is one of the serious concerns—investment of the government in drying facilities. Finally, it might be worthwhile to think that mechanization and postharvest could be put together. For example, a tractor can do land preparation as well as production, harvest and postharvest handling. Good afternoon to everybody.